

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) An apparatus for the catalytic cracking of hydrocarbonaceous feedstocks comprising:

- (a) a first ~~narrower riser reactor~~ cracking section having a radius x, a means for feeding a hydrocarbon feedstock and a means for feeding cracking catalyst located in a lower portion thereof for selectively catalytically cracking said feedstock to gasoline;
- (b) a second ~~wider riser reactor~~ cracking section having a radius y wherein the ratio of y:x ranges from about 1.1:1 to about 5.0:1 operatively connected to said first ~~narrower riser reactor~~ cracking section by a first diameter transition section for selectively catalytically cracking said gasoline formed in said first riser cracking section to olefins;
- (c) a riser product conduit having an inlet operatively connected to said second ~~wider riser reactor~~ cracking section by a second diameter transition section and having an outlet operatively connected to a separator means for separating catalyst from cracked product; and
- (d) a disengager vessel having an upper dilute phase, and lower dense phase, said upper dilute phase suitable for receiving cracked product gases and for supporting said separator means; and said

lower dense phase suitable for receiving catalyst from said separator means; said disengager vessel further comprising an outlet for removing separated cracked gases from said separator means.

2. (Original) An apparatus as defined in Claim 1 wherein the ratio of y:x ranges from about 1.25:1 to about 2.5:1
3. (Currently amended) An apparatus as defined in Claim 1 wherein said first diameter transition section operatively connects said first ~~narrower~~ riser reactor cracking section to said second ~~wider reactor~~ riser cracking section at an interior angle ranging from about ~~5°~~ 185° to about ~~30°~~ 210°.
4. (Currently amended) An apparatus as defined in Claim 3 wherein said interior angle ranges from about ~~8°~~ 188° to about ~~20°~~ 200°.
5. (Original) An apparatus as defined in Claim 1 wherein said riser product conduit has a radius of approximately x.
6. (Currently amended) An apparatus as defined in Claim 5 wherein said second diameter transition section operatively connects said riser product conduit to said second ~~wider~~ riser reactor cracking section at an interior angle ranging from about ~~5°~~ 175° to about ~~30°~~ 150°.
7. (Original) An apparatus as defined in Claim 1 wherein said riser product conduit further comprises a quench injection means.
8. (Original) An apparatus as defined in Claim 1 wherein said separator means comprises a cyclone separator.
9. (Currently amended) An apparatus as defined in Claim 1 wherein said

lower dense phase of said disengager vessel is equipped with a means for stripping hydrocarbons from the catalyst ~~particles~~ received from said separator means.

10. (Currently amended) An apparatus as defined in Claim 1 further comprising a regenerator vessel comprising a means for receiving spent catalyst from said lower dense phase ~~catalyst bed~~ of said disengager vessel, means for regenerating said catalyst, and means for recycling regenerated catalyst to said first ~~narrower~~ riser reactor cracking section.

- 11. Withdrawn.
- 12. Withdrawn.
- 13. Withdrawn.
- 14. Withdrawn.
- 15. Withdrawn.
- 16. Withdrawn.
- 17. Withdrawn.
- 18. Withdrawn.
- 19. Withdrawn.
- 20. Withdrawn.
- 21. Withdrawn.
- 22. Withdrawn.